# All About Ring Joint Gasket Flanges

A ring joint gasket flanges is a specialized sealing component used in high-pressure and high-temperature applications, primarily in the oil and gas, petrochemical, and power industries. These gaskets are designed to form a reliable seal between RTJ flanges and provide a secure connection in critical piping systems.

Available in various ring joint types, such as RTJ gaskets and ring gaskets, they ensure leak-proof seals that are essential for maintaining system integrity. Standards like API 6A govern the

specifications and manufacturing of these gaskets, ensuring safety and performance in demanding conditions.

Relevance of the ring joint gasket

Ring type joint flange face surfaces are an increasingly popular option regarding flange connections. RTJ Flanges are a good alternative to raised face in certain applications. Typically, higher pressure and temperature projects use Ring Type Joints.

They provide a more effective sealing solution to media critical pipeline and pressure vessel infrastructure. Although only an option in ANSI/ASME class flanges, they are the required standard surface sealing in API specification flanges.

This is due to the fact that API flanges typically operate at a higher pressure in comparison to their ANSI/ASME flange counterparts.

The seal of an RTJ gasket occurs under the force of closing the bolt and hardware after mating one flange to another. Typically, the gaskets are made of softer material than the metal of the flanges they are sealing.

The most common of these materials is a soft iron. Slow and steady pressure on the hardware of the flange “crushes” the gasket within the ring joint surface. This helps to prevent any type of leakage during operation of the flange assembly.

Ring Type Joint gaskets are designated by an “R” number. R gaskets are available in oval type and octagonal configuration. Given the smooth sealing surface of ring joint faces, both configurations are virtually interchangeable.

When in doubt, higher pressure and temperature applications typically call for ring joint facings. When optimal surface sealing is necessary, ring gasket type joint flanges are the ideal choice.

Choosing the right ring joint gasket flanges is crucial for ensuring a reliable, leak-free seal in high-pressure environments. Whether you're working with RTJ flanges or other critical piping components, using the correct RTJ gasket can prevent costly failures and downtime.

Always ensure compliance with industry standards like API 6A when selecting ring gaskets for your applications to guarantee optimal performance and safety.